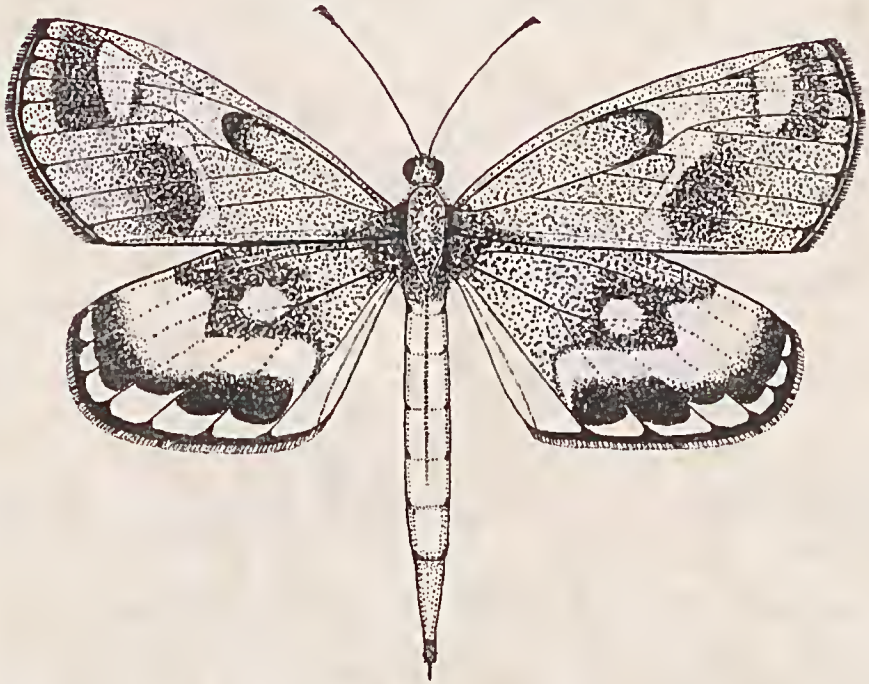
VICTORIAN ENTOMOLOGIST

VOL . 40 No. 4 AUGUST 2010

Print Post Approved PP 349018/00058 Price: $ 3.00



News Bulletin of The Entomological Society of Victoria Inc.

THE ENTOMOLOGICAL SOCIETY OF VICTORIA (Inc)

MEMBERSHIP

Any person with an interest in entomology shall be eligible for Ordinary membership. Members of the Society include professional, amateur and student entomologists, all of whom receive the Society's News Bulletin, the Victorian Entomologist.

OBJECTIVES

The aims of the Society are:

(a) to stimulate the scientific study and discussion of all aspects of entomology,
(b) to gather, disseminate and record knowledge of all identifiable Australian insect species,
(c) to compile a comprehensive list of all Victorian insect species,
(d) to bring together in a congenial but scientific atmosphere all persons interested in entomology.

MEETINGS

The Society's meetings are held at the 'Discovery Centre', Lower Ground Floor, Museum Victoria, Carlton Gardens, Melway reference Map 43 K5 at 8 p.m. on the third Tuesday of even months, with the exception of the December meeting which is held on the second Tuesday. Lectures by guest speakers or members are a feature of many meetings at which there is ample opportunity for informal discussion between members with similar interests. Forums are also conducted by members on their own particular interest so that others may participate in discussions.

SUBSCRIPTIONS (2010)

Ordinary Member	$30 (overseas members $32)
Country Member	$26 (Over 100 km from GPO Melbourne)
Student Member	$18
Electronic (only)	$20
Associate Member	$ 7 (No News Bulletin)
Institution	$35 (overseas Institutions $40)

Associate Members, resident at the same address as, and being immediate relatives of an ordinary Member, do not automatically receive the Society's publications but in all other respects rank as ordinary Members.

LIFE MEMBERS: P. Carwardine, Dr. R. Field, D. Holmes, Dr. T. New, Dr. K. Walker.

Cover design by Alan Hyman.

Cover illustration: The pale Sun Moth, *Synemon selene* Klug, is an endangered species restricted to perennial grassland dominated by *Austrodanthonia* in Western Victoria. It is now extinct in SA, and was presumed extinct in Vic. until its rediscovery, in February 1991, by the late Frank Noelker and Fabian Douglas. The Victorian Populations are parthenogenetic with all specimens comprising females, a most unusual trait in the Castniidae. Illustration by Michael F. Braby.

Minutes of Members Meeting for Tuesday 15 June, 2010

Meeting held at Discovery Centre at Melbourne Museum - opened at 8.00 pm

Present: Council - Peter Marriott (Pres), Peter Lillywhite, David Stewart, Peter Carwardine, Mark Fiedel

Members: Ken Harris, Laura Levens, Geoffrey Weeks, Marilyn Hewish, Jim Tuttle, Grant Kuseff, Joshua Grubb, Linda Rogan, Geoff Hogg, Russell Best

Visitors: Hendrik Falk, Joelle Grubb, Dean Hewish

Apologies: Ian and Margaret Endersby, Daniel Dobrosak, Steve Curle

Previous Minutes Presented Moved K. Harris, M. Hewish accepted

Correspondence

Soc for Insect Studies circular 145. Articles on Forensic Entomology, processionary caterpillars, book reviews on The Guide to beetles of Australia and the website Lucanids of the World, Secret Life of Bees.

Treasurers Report

- New members: K. Proudley (Binginwarry), A Organ (Brunswick), M. Halsey (Yackandandah)
- Membership applications: G. Hogg (Dept. of Immunology Melbourne University), G. Moors (Sedgewick)

Editors Report

Linda Rogan has assisted Daniel with the transfer of the template from Word to Publisher. It is anticipated that Linda will do the preparation in future and Daniel will continue with the mailouts.

General Business

1. It was noted that Arturs Neboiss passed away last weekend. Arturs held the position of Senior curator at the Museum prior to Ken Walker and was an active member of this Society. Further information will be published in a future Magazine.

2. The rest of the meeting was devoted to **MEMBERS' PRESENTATIONS.**

Geoff Weeks has 10 bound editions of Australian Geographic for sale – each year's volume will be available for $100.00 and for each volume sold he will present $20.00 to Society. Interested people should contact the secretary or Geoff for information.

Marilyn Hewish

Marilyn presented a powerpoint with images of moths etc. taken over the last few years of the things that have taken her fancy for beauty and interest. Sometimes she goes out once or twice a week and has photographed over 600 named species.

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(Continued from page 73)

Among the photographs were the following:

- First off was the moth that hooked Marilyn – a Mistletoe moth *Comocrus behrii* at Long Forest where there is an enormous concentration.
- *Gastrophora henricaria, Anthela repleta* – two specimens from the Otways showing the variability.
- *Chalepteryx collesi* – found the caterpillar first and went back to the location in May and found the adult.
- Helena Gum moth in Otways that have a distinctive display to flash the eyespots on wings.
- *H. scrofa* – a very common species but these have their own attraction with the surprising hind wings.
- *Epicoma contristis* demonstrates the beauty of the scales. Forester moth day flyer
- *Thalaina clara, Philobota arabella, Gastrinodes argoplaca* blends well into the bark background.
- *Crypsiphona ocultaria* grub being eaten by Striated Pardelope
- *Poecilasthena thalassias* which is a beautiful moth seen in a storm at the Otways along with the hepialids.
- *S. cordalis* has a weird way of resting. Plume moths also have very different wings.
- *Nola delograpta* looks like an elephant. *Genduara submotata* male has clear wings like a bee.
- *Anthela achroptera* and *Glyphiptera gypsonata* were both new records for state.
- Sometimes there are so many things on the sheet the moths can't land making things even more difficult to photograph.

Russell Best gave a *Nature Share* update

- Still under construction with a release date towards the end of the year.
- Species lists have been added and people will be able access 8,150 species with an additional 11,500 species to be added, 65% being insects. Introduced plants and animals are included.
- When someone puts in a name the program will not allow for typos.
- Photos can be uploaded and the time and date are automatically registered.
- Automatically uploads location with Google Maps
- Collections can be added.
- Observations can be put in without any photograph. Species photos can be uploaded and identified.
- People will be able to find lists of species that can be found in a particular area.
- Search functions will be able to search on particular features e.g. red beetle.
- FIS is the standard data system that is being used.
- Hope to have sounds when launched.
- Multiple photographs are to be ranked and the most useful will be shown when a plant is entered but all will be available.
- Rarer plants and animals will have map references but these would be locked for security purposes, following the guidelines from DSE.

David Stewart had a PowerPoint presentation that followed up on his previous presentations documenting the affects on the invertebrate fauna as a result of recent rains and the breaking of the drought. Butterflies of the genus *Delias* are heavily populating and the predators are also increasing. There is an increase in the number of bees carrying mites. E.g. 6 of 10 collected bees on *Carpobrotus*. Different species of mite on different bees. Locusts are beginning to plague again.

D. aganippe is flying in larger numbers than for quite some time. Mantis rarely seen has been seen three times this year.

Peter Carwardine presented three extensive books on insects:

CSIRO book on Insects of Australia.

1926 Insects of Australia and New Zealand. By RJ Tillard. Line drawings and coloured plates. Covered most insect order by himself.

Froggatt on Australian Insects. RJ Tillyard in 1926.

WW Froggatt produced 120 publications over his lifetime. About 90% were on dragonflies. Began in 1904 and last were published posthumously in 1940. His 43rd was on dragonflies and did later ones on biological controls.

He was born in1881 in Norwich England, Cambridge and 1904 Sydney Grammar school in maths and when there became interested in dragonflies. Lectured in zoology at NSW University. Worked in NZ. 1928 - 1934 at CSIRO in Canberra. Named quite a few species, some in NZ. Collection is held in ANIC, Aust. Museum and British Museum. He died in 1937

Peter Marriott

A very diverse moth fauna exists at Gilwell Park Scout Camp near Gembrook with over 350 named species. Many cannot be identified and quite a few of the specimens are rare or of restricted distribution and at least one has not been recorded anywhere else. A presentation of photographs illustrated these observations. It is interesting to contemplate the reasons for this diversity and it is believed that the high level of indigenous plants, quality management and the absence of any fire through wildfire or fuel reduction may all be factors. The species list is extensive and anyone interested may contact Peter for the full list.

Meeting closed at 9.30 pm

Minutes of the Council Meeting 27 July 2010

Present: I. Endersby, P. Marriott, P. Carwardine, S. Curle, D. Dobrosak, L. Rogan

Apologies: K. Walker, D. Stewart, P. Lillywhite , M. Fiedel

Minutes: Minutes of the Council Meeting [Vic.Ent. 40(3): 55-60] were accepted, P. Carwardine moved, seconded S.Curle.

Linda Rogan was co-opted to Council. All agreed.

Correspondence:

Call for volunteers to aid in testing keys for Identifying the Baetidae (nymphs) and Genera of Australian Mayflies (adults). Workshops being run in the last week of July.

Glow Worm discovery. In summary, 3 new species of glow-worms have been described and Parks Victoria estate provides most of their habitat. The 3 species are endemic to Mt Buffalo, the Otways and the Central Highlands. The Mt Buffalo spp is particularly restricted and an FFG statement has been prepared by Parks. Further details expected in a future society newsletter.

Parks Victoria - We still haven't identified any specific terrestrial invertebrate monitoring projects as part of our broader strategy, but there is scope for some aquatic invertebrate monitoring. For example, we would be interested in using inverts to help inform us on the condition of the Aire River in the Otways and Tidal River at the Prom. Would such projects be of interest to the Society?

> The council felt that as a society, we should become involved in more of these sorts of projects and thus we are seeking interested parties that may want to assist Parks with this valuable work. The logistics are still being worked out and more information will follow.

The University of Alabama Press is publishing a book titled Butterflies of Alabama. To learn more about this book, visit its page referring to the following website : http://uapress.ua.edu/product/Butterflies-of-Alabama,4916.aspx

The society has received Vol 49 part 2 Australian Journal of Entomology and Myrmecia vol 46, part 2 May 2010

Treasurers Report:

> General account $7190, Le Souëf account $5504, publication $11304.
>
> Approximately 16 members still un-financial.
>
> Term deposit has been renewed for 6 months at 5.8%

Editors report:
The society has received an extensive article on the history of Entrecs Part 1. P. Marriott to discuss further with Kelvin Dunn regarding publication of the article.
editor@entsocvic.org.au to be changed to L. Rogan. After this next issue, all copies go to Linda. Linda will copy in Daniel. Linda to do all the setting up on publisher (Sept -Oct); then pass electronic copy to Daniel / printer. Hardcopy to deliver to Daniel who will organise stuffing and postage.

P. Carwardine to verify pricing for labelling.

Newsletter deadline dates:

2010: Sept 17, Nov 12 (due to early meeting in Dec.)
2011: Jan 15, Mar 18, May 20, July 15, Sept 16, Nov 11 (due to early meeting in Dec.)

General Business:

2011 Schedule

2011:			
Month	*Date*	*Planned event*	
January:		No meeting	
February:	15th	General Meeting	Ken Harris: Madagascar
March:	15th	Council Meeting	
April:	19th	AGM	AGM
May:	17th	Council meeting	
June:	21st	General meeting	Members Presentations
July:	19th	Council meeting	
August:	16th	Members excursion	TBA
Septem-ber:	20th	Council meeting	
October:	18th	General meeting	TBA
November:	15th	Council meeting	
December:	13th	General meeting	Members' presentations Please note, December's meeting date is second Tuesday of December to try and avoid Christmas celebrations

We have a few idea's for the agenda for 2011. We are looking for inspiration and are canvassing for ideas from our members as to what *you* would like to be scheduled for next year's agenda. Ideas and thoughts so far:

- Skydancers, Harcourt
- Mosquitoes visit or presentation?
- Moth night?
- December BBQ incorporating a Moth / Insect collecting / recording night?

Please email the secretary or indeed anyone on the council with your thoughts, comments or suggestions for next year's itinerary.

Don't forget, Members night coming up... December

Publications

MOV 3 & 4: Both still in the pipeline and on schedule for later this year.

Species Checklist

The aim of the online checklist is to provide a comprehensive and valid checklist of species found in Victoria. The target audience initially is people who have a scientific interest in this sort of accurate listing.

V. Curle to address further. Testing of 5,000 records vs speed to be tested.

In addition, further work is being progressed with NatureShare and there could be opportunities for both parties to gain from a single source of data.

Website / Facebook

The take up of the Facebook group and subsequently the Facebook page has been slow. Statistical figures from the Facebook page and website were presented to the council to stimulate thought and interest.

Amendments to Constitution

The motion for the amendments to the constitution to be revisited at the June Members meeting. Summary of these amendments as follows:

The Council of the Entomological Society recommends that the following alterations be made to the Constitution of the Society. Members will be asked to approve these changes at the General Meeting on 19th October 2010. A copy of the full Constitution can be found on the Society's website www.entsocvic.org.au

3. MEMBERSHIP

Delete Life Member category – it has never been invoked and the subscription rate to equate with Ordinary membership would be ridiculously high

4. NOMINATION & ELECTION

Replace Clause 4 with

"An application of a person for membership of the Society must be in writing in the form set out in Appendix 1 and lodged with the Secretary of the Society. As soon as practicable after the receipt of the application, the Secretary must refer the application to the Council, which must decide whether to approve or reject the application. If the Council approves an application for membership, the Secretary must, as soon as practicable, notify the applicant in writing of the approval and request payment within 28 days after the receipt of notification for the first year's annual subscription. Upon receipt of the annual subscription the Secretary must enter the applicant's name in the register of members.

An applicant for membership becomes a member and is entitled to exercise rights of membership when his or her name is entered on the register of members."

If the Council rejects an application, the Council must, as soon as practicable, notify the applicant in writing that the application has been rejected.

5. SUBSCRIPTIONS

Delete Life Member to be consistent with Clause 3(e)

Insert new Rule 7, and renumber subsequent Rules.

7 Disputes and Mediation

(a) The grievance procedure set out in this rule applies to disputes under these Rules between a member and another member; or a member and the Association.

(b) The parties to the dispute must meet and discuss the matter in dispute, and, if possible, resolve the dispute within 14 days after the dispute comes to the attention of all of the parties.

(c) If the parties are unable to resolve the dispute at the meeting, or if a party fails to attend that meeting, then the parties must, within 10 days, hold a meeting in the presence of a mediator.

(d) The mediator must be a person chosen by agreement between the parties; or, in the absence of agreement:

(i) in the case of a dispute between a member and another member, a person appointed by the committee of the Association; or

(ii) in the case of a dispute between a member and the Association, a person who is a mediator appointed or employed by the Dispute Settlement Centre of Victoria (Department of Justice).

(e) A member of the Association can be a mediator.

(f) The mediator cannot be a member who is a party to the dispute.

(g) The parties to the dispute must, in good faith, attempt to settle the dispute by mediation.

(h) The mediator, in conducting the mediation, must give the parties to the mediation process every opportunity to be heard; and allow due consideration by all parties of any written statement submitted by any party; and ensure that natural justice is accorded to the parties to the dispute throughout the mediation process.

(i) The mediator must not determine the dispute.

(j) If the mediation process does not result in the dispute being resolved, the parties may seek to resolve the dispute in accordance with the Act or otherwise at law.

7. MANAGEMENT

Insert a new subclause

(e) Notices of meetings may be sent

(i) by prepaid post to the address appearing in the register of members, or

(ii) if the member requests, by electronic transmission.

and renumber subsequent subclauses

9. OFFICE BEARERS

3 The SECRETARY shall:

(c) Keep minutes of the [add "resolutions and"] proceedings of Council and General meetings.

10. MEETINGS

Add "At any meeting of the members, or a Council meeting, if the President and the Vice President(s) are absent, or are unable to preside, the members present must choose one of their number to preside."

A.O.B. August 17th Excursion to EPA

D. Dobrosak to add flyer to publication.

I.Endersby to email John Dean for excursion details as Peter Lillywhite is currently unwell.

Le Souef

- I. Endersby to produce an article highlighting the achievements and honour role of the Le Souef award over the years – and publish for December

Next Meeting

Meeting closed 18:33

2010:			
Month	*Date*	*Planned event*	
August:	17th	Members excursion	Visit to EPA Centre for Environmental Sciences to view the aquatic collection
September:	21st	Council	
October:	19th	General	Jim Tuttle – Sphingidae talk
November:	16th	Council	
December:	14th	General meeting	Members' presentations Please note, December's meeting date is second Tuesday of December to try and avoid Christmas celebrations.

A Reconnaissance Survey for Drought Affected Butterflies and Sun-Moths in the Northern Flinders Ranges of South Australia and Further Local Observations on Sun-Moths

R. GRUND

9 Parkers Rd, Torrens Park, Adelaide, S.A., 5062

Introduction

This paper is based primarily on a brief survey of butterflies and sun-moths undertaken by the author in the Northern Flinders Ranges Region of South Australia during 12-17 October 2009. The main reason for the survey was to investigate for the presence of *Croitana arenaria pilepudla* (Hesperiidae). Opportunistic observations were also made on other lepidoptera.

The survey route started at Mambray Creek in the southern Flinders Ranges, then proceeded along the Port Augusta-Quorn-Hawker Highway to near Wilpena, then diverted west to the Leigh Creek Highway and Leigh Creek, from whence it entered the Gammon-Arkaroola areas of the Northern Flinders Ranges. The return route to Adelaide took in the east side of the north Flinders Ranges to Blinman then south to Hawker and Orroroo, then diverted east to Yunta. From there the route went south over a dry portion of South Australia very rarely transited by travellers, across the Benda Range (part of the greater Olary Range) and into the flat low-lands of the north-west Murray River Basin to Morgan, then south along the Murray Valley to Murray Bridge and onto Adelaide.

The travelled region has for the previous ten years been under drought stress, but a period of rainfall in the Flinders Ranges over the prior autumn and winter prompted the author to undertake the trip, believing the rains may have produced a flush of new vegetation growth, particularly host-grasses suitable for *Croitana*. However, it turned out the area north and particularly east of Blinman was in very poor condition, still showing the ravages of the drought. The rain having had little immediate effect on the area's recovery.

Survey Results

HESPERIIDAE

Croitana arenaria pilepudla

Unfortunately, this skipper was not seen during the survey. Its documented preferred hostplants comprise the grasses *Austrostipa acrociliata*, *A. platychaeta* and *Enteropogon* (Poaceae) (Grund 1998-2010). Herbarium records indicate these grasses are widespread in South Australia but records of *Croitana* (Grund 1998-2010) suggest the skipper has biological preferences for the hot temperate and northern inland regions of the state.

Herbarium historical records for the above grasses include the Flinders Ranges and so it was believed there was a good chance that *Croitana* should still exist in that region, it being similar to the Gawler and Middleback Ranges on Eyre Peninsula where *Croitana* presently occurs. It was found during this survey that *Enteropogon* was locally common in the Mambray Creek near the rail-line, but there were no signs of *Croitana* habitation. Just south of Wilpena a single large clump of *A. acrociliata* was seen growing in a protected situation up through an old fallen tree, but there was no sign of *Croitana*. Between Parachilna and Beltana there were occasional small creek lines containing good tussocks of *Enteropogon ramosus* protected by *Acacia* bushes, but again no indications of *Croitana*.

Thereafter, no further hostplants for this skipper were seen during the survey! At the same time the flat country west of the Flinders Ranges was acting as a dust bowl, with strong westerlies pushing blinding dust across the highway and into the sky, and then onto Sydney!

An attempt to reach the upper reaches of the Hamilton Creek at the north end of the Gammon Ranges, (where *Enteropogon* has previously been noted in Herbarium records), was aborted due to road washouts in the west, and the road between Balcanoona and Moolawatana along the east side of the Gammon Ranges was so deeply corrugated that that the author's vehicle started to fall apart. (The Poontana Creek crossing of the above same road, just south of Hamilton Creek crossing, contained good tussocks of *Enteropogon* when the author had previously travelled on the road in 30 April 2005. Unfortunately, at that time there was no *Croitana* activity. During that trip *Enteropogon* was not seen at any other creek crossing along the road, including the Hamilton Creek.)

The area between Balcanoona and Angorichina was still in drought with dead trees everywhere and no understorey. In the Wilpena and Blinman areas that had received the bulk of the previous rain in the region, the regenerating understorey comprised only weeds and depauperate small *Austrostipa*. In some creeks adjacent to the roads and where they had been fenced off from stock, there were tussocks of foul-smelling kerosene grass *Cymbopogon ambiguus* (Poaceae) that desperate kangaroos had cropped but left alive. The impression was reached that the entire region has suffered severe historical ravaging and overgrazing by animals such that if *Croitana* ever existed in the region then it is highly unlikely it exists any longer.

Herimosa albovenata

This skipper is known to occur in the southern Flinders region (Grund 1998-2010). In the Hawker-Yunta area there was plenty of hostplant (*Austrostipa eremophila*) growth following the rains. A limited look for this skipper in the area did not reveal any activity.

PIERIDAE

Belenois java teutonia

Interestingly, this butterfly was not seen flying during the survey. Its local hostplant the Tree Caper *Capparis mitchellii* (Capparaceae) was generally found to be in miserable condition in the Gammon Ranges where local park rangers have allowed the trees to be attacked by feral goats, which by standing on their hind-legs have skirted the trees of greenery for two metres off the ground. During a previous visit to the area on 30 April 2005, these trees were noted to be in good condition with green-growth extending down to near ground level. No early stages of the butterfly were seen on the trees, supporting a similar earlier observation by the author on the above date (Grund 2006) that this butterfly is not permanently resident in the area and cannot survive the winter in the northern Flinders Ranges on its natural hostplants, being replenished (possibly annually) by spring migrations of the butterfly from northern tropical areas.

Elodina padusa

The odd butterfly was occasionally seen flying around its host *Capparis mitchellii* growing near Italowie Gorge and Arkaroola Village, suggesting this butterfly is likely a permanent resident. During the above previous visit this butterfly was plentiful and very active.

SATYRINAE

No satyrs were seen during the survey.

LYCAENIDAE

Candalides(Erina) acasta and *Candalides(Erina) hyacinthina simplexa*

Both these butterflies have previously been recorded from the high plateau areas of the Gammon Ranges where they are known to utilise a hostplant *Cassytha peninsularis* var. *flindersii* (Lauraceae) that is reported to proliferate on the plateau (Grund 1998-2010). During this survey, this plant was also seen to be locally common along some of the creek-lines in the low sheltered areas of the ranges, but neither of the butterflies was seen flying near it. The author did not visit the much cooler and moist high plateau areas.

Candalides(Cyprotides) cyprotus and Ogyris

The route between Yunta and Morgan comprised sparse vegetation initially, but in southern areas the vegetation changes to a black oak *Casuarina pauper* (Casuarinaceae) woodland containing an understorey that includes common *Grevillea huegelii* (Proteaceae), a preferred hostplant for *C. cyprotus*. This plant was not in flower or bud and no evidence for the butterfly was seen. However, as the butterfly occurs at nearby Danggali and Waikerie it is likely it would also occur in this woodland.

Mallee vegetation with the mistletoe *Amyema miquelii*, as a possible habitat for *Ogyris genoveva*, *O. orocles*, and *O. subterrestris*, occurred on the sand dune rises nearer the Murray River, but was never dominant. One area of mallee was briefly examined but no *Ogyris* were seen.

Jalmenus icilius and J. lithochroa

Occasional stands of their main hostplant in the area, *Acacia victoriae* (Mimosaceae), were periodically examined for the presence of adults and early stages during the survey, but none were seen.

CASTNIIDAE

Synemon 'FlindersRa'

Little has been documented about this large and colourful, undescribed sun-moth. The author stumbled upon a small colony of this moth south of Wilpena on the way north to the Gammon Ranges, so it was then decided thereafter to keep a lookout for it. It was quickly determined that the only possible tussock-plant then present in the area that could serve as a hostplant for the moth was the kerosene grass *Cymbopogon ambiguus*. During a previous inspection of the Australian National Insect Collection Taxon Database for Castniidae (CSIRO 2009) it was noted that E.D. Edwards and E.S. Nielsen found the moth to be locally common in the Gammon Ranges during surveys in 1993 and 1997. During the current survey the author noticed that the *Cymbopogon* was locally common along certain creek-lines in the Gammon Ranges, but the moth was not flying even though the weather was fine and hot. This raised the question as to whether the moth was still extant in the area, or was it just waiting for a better time to fly?

On the way south again the present author re-examined the Wilpena location for the moth, arriving at 1.30pm when the moth was already active. The day was hot with broken cloud. Hostplants were locally common in the dry bed of the ephemeral creek (but still damp under the surface from the recent rain), accompanied by low weeds and small *Austrostipa*. The creek was lined with large red gums. Unless disturbed, the common males were not actively flying, preferring to sun themselves on the ground. There was no courtship activity. The rare females were active near ground level, looking for hostplants to lay eggs on. One was seen to fly slowly about the hostplants and then land on the ground next to a selected plant, walk towards the plant and disappear under the plant overhang of

leaves to select a position to lay an egg(s). The author did not disturb her activity so it is not known how many eggs she actually laid. The female soon reappeared and flew a short distance away from the hostplant before settling on the ground to rest. No adult was seen to feed at flowers. At about 3.00pm the adults started to disappear. One female was seen to fly to a high clay bank adjacent to the creek, and then disappear down a wide crack. All adults had disappeared by 3.30pm. One plant was dug up to look for early stage activity, but none were seen.

The author left the site and headed south to camp at the Pekina Creek, where *Cymbogon* was also noted. There was no adult *Synemon* activity at this site in the morning but it looked suitable for the moths' presence. *Cymbopogon* also occurred in the Yunta Creek when visited later in the day (at 2.30pm), where adults were active. This would suggest that since *Cymbopogon ambiguus* also occurs in the ephemeral creek system of the Olary and Barrier Ranges that this moth is likely to occur in those areas as well, (provided they can escape the locust spraying).

The egg of this moth (Figs 1, 3) is pale yellow coloured when freshly laid, later turning white, of typical elongate ellipsoidal spindle shape (Common and Edwards 1981), about 2.05x1.0mm, having six ill-defined equi-spaced longitudinal ridges converging at each end of the egg. There are numerous (~40), less prominent very fine transverse ridges or striae that form an interlocking disjunction at the longitudinal ridges (e.g. Fig. 2, Common and Edwards 1981). Each end of the egg constricts to a blunt point, one of which (usually the bluntest) contains the micropyle.

Synemon nais

At the end of the survey, two males of this species were seen flying together in an area of native grassland near Mannum. This grassland was dominated by *Austrostipa eremophila*, but there were also patches of *Anstrodanthonia* (Poaceae) and *Lomandra effusa* (Asparagaceae). This sighting fills in a distribution gap for this sun-moth between known recordings at Nullarbor and Yorke Peninsula in the west, and north-west Victoria in the east (CSIRO 2009, Douglas 2003, Grund 2009, 2010, Marriott 2003). They occurred with *Herimosa albovenata*. Based on other duplicate recordings for these two species, this would suggest this sun-moth would likely cohabit with *Herimosa* in its known range in South Australia (Grund 1998-2010).

Synemon plana

Following upon the successful discovery of *S. nais* at Mannum, the author later investigated for the presence of *S. plana* in the Upper Southeast. Current knowledge suggested it would most likely occur in grassy buloke woodland *Allocasuarina luehmannii* (Casuarinaceae). P.B. McQuillan had previously recorded a male from Bordertown in early December 1975 (CSIRO 2009). Grund (in Stokes 1996) had also previously undertaken a survey for butterflies in this region within such habitat (11-14 December 1995), but never recorded the moth. During 7-8 December 2009, the author revisited the best of these localities that fulfilled likely criteria for the moth's presence. Two of these localities comprised several small areas in the Wolseley area and the Common ground at Bordertown. The moth was not seen at the former, even though the weather was good, and it is likely that area has suffered major degradation historically. The best site was Bordertown, but unfortunately the weather turned cloudy during the day that probably compromised the survey, although it is deemed the site could still contain the moth.

Synemon selene

At the behest of Fabian Douglas, this moth was looked for at its last known extant site in South Australia, near Two Wells north of Adelaide. Based on previous butterfly surveys in this area by the author, some of the most promising remnant grassland sites in the region (high proportion of *Austrodanthonia*) were re-examined for the presence of the moth on 2 December 2009 and 2 March 2010,

without success. However, the country was still suffering from the effects of drought, which may have compromised the brief look. This is further compounded by the rapid development in the region due to Adelaide's northward expansion that is compromising the remaining small remnant native habitat areas. However, it would seem there should be further suitable sites for this moth in areas on the northern Adelaide Plains and further east across the northern Adelaide Hills. Also along the east side of the Adelaide Hills and along the Murray Valley. It would require local community help to evaluate such possible sites.

Synemon jcaria

Based on the previous recognized presence of *Austrodanthonia* and *Lomandra effusa* the author returned to the Mannum area on 23 February 2010 to examine native grassland areas for the presence of *S. selene* and *S. jcaria*. The former was not seen, but the latter was present. It was seen at only one site, which was seemingly the most inhospitable habitat imaginable. Comprising highly overgrazed and degraded ground that was essentially barren except for the presence of the seemingly inedible iron-grass *Lomandra effusa* that was severely stressed by the drought and the current very hot summer temperatures.

Both sexes were present. The males were mostly in good condition, and mainly settled although some were actively flying near ground level presumably looking for newly emerged females. The females were actively searching out suitable iron-grass hostplants on which to lay eggs. Similar to *S.* 'FlindersRa', the female initially flies about the plants, is then attracted to one which she briefly investigates by flying around it, then satisfied she will fly into the open tussock and land on an internal leaf before walking into the depths of the plant to quickly lay egg(s), before flying off to a nearby spot on the ground to rest for awhile. This activity quickly causes the females to become tattered, as the narrow leaf ends of the hostplant are divided into two short needle-like processes that can quickly shred a wing.

No adult seemed interested in feeding, although there were no flowers to feed from anyway. The area was extremely dry and parched, and one wonders why the moth bothers to fly at such a baking hot period of the year, in such a degraded habitat!

The egg of this moth (Figs 2, 4) is similar to *S.* 'FlindersRa' but differs by being slightly larger 2.5x1.1mm and has about 15 ill-defined equi-spaced longitudinal ridges or disjunctions, and ~68 striae. The variation in the number of longitudinal ridges for this genus might suggest an important taxonomic attribute.

Lomandra effusa is a common plant in South Australia, often occurring in native grassland remnants, and one would again wonder why *S. jcaria* is not more often recorded. Seemingly ideal grassland containing the iron-grass occurs along the eastern rain-shadow areas of the Mt Lofty Ranges. Such habitat occurs around Callington-Monarto that was examined by the author on 1 March 2010, but no *Synemon* were seen. The author returned to the Mannum area on 24 March 2010 but again there were no *Synemon*. Based on the *S. jcaria* presence in northwest Victoria (CSIRO 2009, Douglas 2003, Marriott 2003) the author also did a pass through Ngarkat Conservation Park on 22-23 February 2010 looking for the moth, without success (although incidentally, *Antipodia atralba* and *Hesperilla dounysa* (Hesperiidae) early stages were encountered on *Gahnia deusta* (Cyperaceae) in the northern parts of the park).

Comment

The diversity and numbers of butterflies seen in the Flinders Ranges during the survey was very low, suggesting it would take some time for the butterfly populations to recover. Since the completion of this survey to June 2010, the region has received plenty of rain (280mm), which should help the recovery. On the downside, the locust population has apparently exploded with the recent good

rainfalls, but the methodology employed to reduce locust numbers will coincidentally also likely deplete the recovering butterfly communities. Grassland lepidoptera populations in the Mannum area may also be threatened by the Branched Broomrape *Orobanche ramosa* (Orobanchaceae) noxious weed eradication program.

References

COMMON I.F.B. and EDWARDS. E.D. 1981. The life history and early stages of *Synemon magnifica* Strand (Lepidoptera: Castniidae). Journal Australian Entomological Society 20: 295-302. *Australian Journal of Entomology.*

CSIRO, 2009. Australian National Insect Collection Taxon Database, Castniidae. Viewed 01 July 2009, <http://anic.ento.csiro.au/database/biota_details.aspx?BiotaID=26617>

CSIRO Entomology, 2009. Australian Moths Online, Castniidae. Viewed 01 July 2009, <http://www.ento.csiro.au/gallery/moths/Castniidae>

DOUGLAS, F. 2003. Five Threatened Victorian Sun-moths (*Synemon* species). Action Statement, Flora & Fauna Guarantee Act 1988, No. 146. Dept of Sustainability & Environment, Victoria.

GRUND, R. 1998-2010. South Australian Butterflies, http://www.chariot.net.au/~rgrund/index.htm, (an information website for South Australian butterflies).

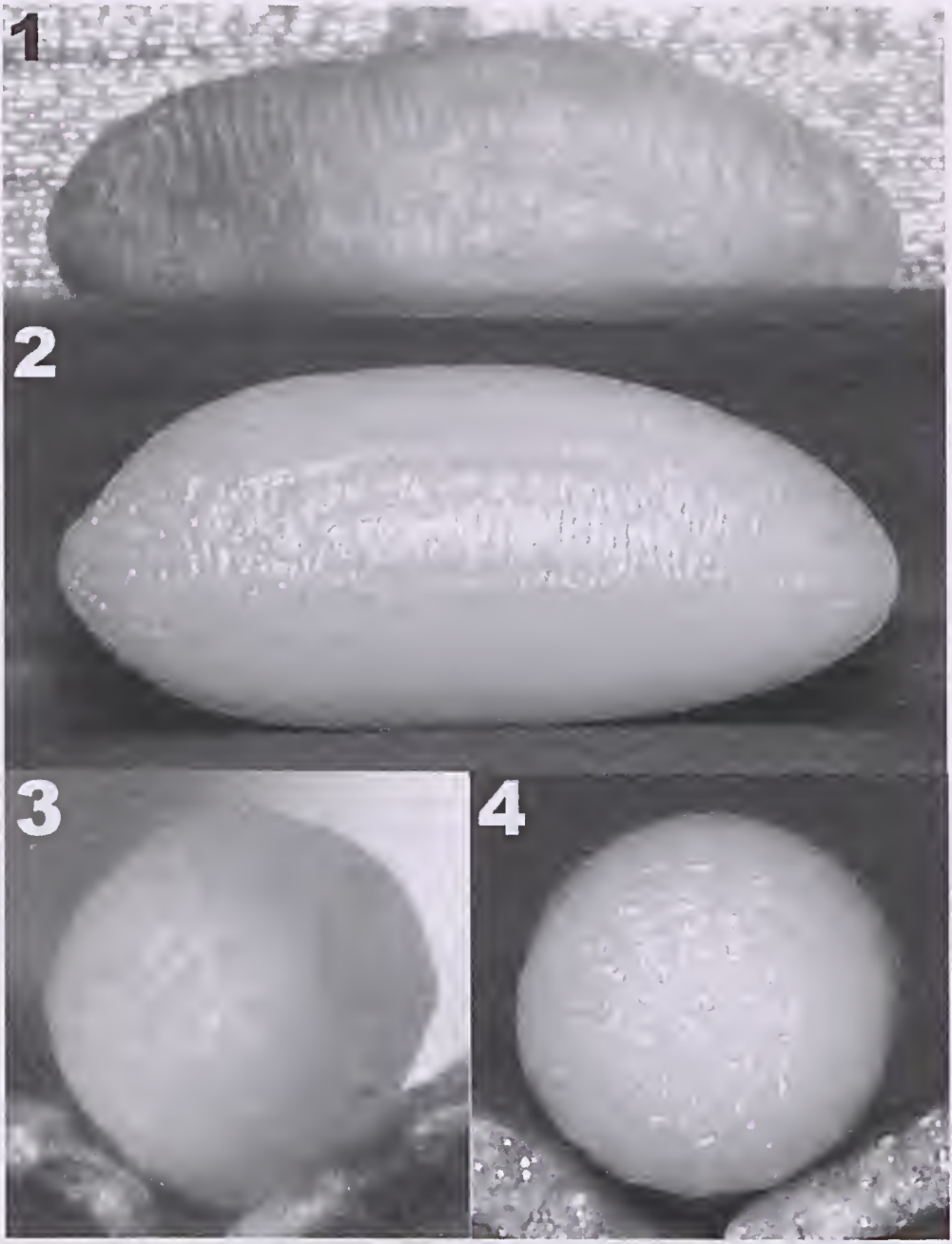
GRUND, R. 2006. Butterfly trip to Innamincka. *Butt. Conserv. SA Newsletter.* **23.**

STOKES, A.L. 1996. *A Biological Survey of Box and Buloke grassy woodland in the Upper South-east of South Australia.* 82pp. Dept. of Env. & Nat. Res., South Australia.

GRUND, R. 2009. New range extensions and other data for selected butterflies and sun-moths from the Maralinga and Far Westcoast areas of South Australia. *Vic. Ent.* 39(6): 108-114.

GRUND, R. 2010. New range extensions and other data for selected butterflies and day flying moths from coastal areas of the Far Westcoast, Northern Eyre Peninsula and Mid North Regions of South Australia. *Vic. Ent.* 40(2): 36-38.

MARRIOTT. P. 2003. Victorian Sun-moths Lepidoptera: Castniidae. *Vic. Ent.* **33**(6): 91-94.



Figs 1, 3. *Synemon* 'FlindersRa' egg (partially dehydrated); side (1), end (3).

Figs 2, 4. *Synemon jcaria* egg; side (2), end (4).

Checklist of Victorian Carpets (Lepidoptera, Geometridae, Larentiinae) – Part A: The genus *Chrysolarentia* Butler, 1882

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Abstract

A list of the species of *Chrysolarentia* Butler known, or expected, to occur in Victoria is given. Explanatory notes are provided where these are deemed useful.

Introduction

The family Geometridae has six Australian subfamilies, five of which are found in Victoria. The subfamily Larentiinae is well represented in south-eastern Australia. These moths are small to medium sized and most hold their wings flattened against the surface or vertically above the body, butterfly-like, when they rest. The common name 'Carpet' is often applied to this subfamily in the northern hemisphere, referring to the richly embroidered appearance of many of the species.

Chrysolarentia is an Australian genus, which makes up about half of the Victorian Larentiinae. In the *Checklist of the Lepidoptera of Australia*, Geometridae (McQuillan & Edwards 1996) seventy-seven species of *Chrysolarentia* are listed, of which fifty-eight (75%) are recorded here from Victoria. The remainder of the Victorian species of the subfamily will be presented in the next edition of this bulletin as part of a project to list every Victorian moth and butterfly (Marriott *et al.*, 2007).

Many larentiines come readily to lights at night but some are more frequently observed during the day and this is true of *Chrysolarentia*, which contains many alpine and subalpine species. Other species in the genus have adapted to different habitats and may be found in mountain forests, heath land or dry country. *Chrysolarentia* is a southern Australian group not found north of southern Queensland. Many species have bright yellow hind wings.

The present list has been compiled from the collections held at the Australian National Insect Collection in Canberra (ANIC), and the Melbourne Museum as well as from papers published by Lower (1893), Meyrick (1891) and Turner (1904. Material in private collections has also been examined, in particular from Axel Kallies (Melbourne), Douglas Hilton (Warrandyte), John Landy (Melbourne) and Steve Curle (Melbourne). Additional observations and specimens from Marilyn Hewish (Bacchus Marsh), Ken Harris (Churchill), Steve Williams (Eppalock) and Jenny Holmes (Great Western) have been most useful.

In the list below one species previously included with *Xanthorhoe* has been added and four new synonymies are noted. Two species which have not been recorded from Victoria but which are probably present have been included based on currently known distributions. Confirmation of these by readers would be appreciated together with any additional observations. More information will be available with the publication of the forthcoming volume of *Moths of Victoria* devoted to the Larentiinae and Sterrhinae.

List.

The list follows the order of species in the *Checklist of the Lepidoptera of Australia* (1996).

Chrysolarentia conifasciata Butler, 1882
Chrysolarentia heterotropa Turner, 1926
Chrysolarentia interruptata (Guenée, [1858])
Chrysolarentia actinipha (Lower, 1902)[1]
Chrysolarentia epicteta (Turner, 1908)
Chrysolarentia psarodes (Turner, 1904)
Chrysolarentia lucidulata (Walker, 1862)
Chrysolarentia polycarpa (Meyrick, 1891)
Chrysolarentia stereozona (Meyrick, 1891)
Chrysolarentia chrysocyma (Meyrick, 1891)
Chrysolarentia perornata (Walker, 1862)
Chrysolarentia mecynata (Guenée, [1858])
Chrysolarentia leucozona (Meyrick, 1891)
Chrysolarentia insulsata (Guenée, [1858]) spec. rev.[2]
Chrysolarentia correlata (Walker, 1862)[2]
Chrysolarentia vicissata (Guenée, [1858])
Chrysolarentia heliacaria (Guenée, [1858])
Chrysolarentia symphona (Meyrick, 1891)
Chrysolarentia panoclira (Turner, 1922)
Chrysolarentia perialla (Turner, 1922)
Chrysolarentia ptochopis (Turner, 1907)
Chrysolarentia aprepta (Turner, 1922)
Chrysolarentia phaedra (Meyrick, 1891)
Chrysolarentia gypsomela (Lower, 1892)
= *pentodonta* (Lower, 1915) syn. nov.[3]
Chrysolarentia argodesma (Meyrick, 1891) comb. nov.[4]
Chrysolarentia rhyncota (Meyrick, 1891)
Chrysolarentia persimilis (Turner, 1926)
Chrysolarentia cataphaea (Meyrick, 1891)
Chrysolarentia aglaodes (Meyrick, 1891)
Chrysolarentia imperviata (Walker, 1862)
Chrysolarentia heteroleuca (Meyrick, 1891)
Chrysolarentia opipara (Turner, 1907)
Chrysolarentia doliopis (Meyrick, 1891)
Chrysolarentia bichromata (Guenée, [1858])
Chrysolarentia leptophrica (Turner, 1922)
Chrysolarentia orthropis (Meyrick, 1891)
Chrysolarentia oxygona (Meyrick, 1891)
Chrysolarentia polyxantha (Meyrick, 1891)
Chrysolarentia trygodes (Meyrick, 1891)
= *crocota* (Turner, 1904) syn. nov.
= *phaulophanes* (Turner, 1936) syn. nov.[5]
Chrysolarentia cryeropa (Meyrick, 1891)
Chrysolarentia plagiocausta (Turner, 1904)
Chrysolarentia severata (Guenée, [1858])
Chrysolarentia arachnitis (Turner, 1904)
Chrysolarentia squamulata (Warren, 1899)
Chrysolarentia plesia (Turner, 1904)
Chrysolarentia microcyma (Guest, 1887)
Chrysolarentia euphileta (Turner, 1907)
Chrysolarentia cydalima (Turner, 1907)
Chrysolarentia tacera (Turner, 1922)[6]
Chrysolarentia adornata (Guenée, [1858])
Chrysolarentia leucophanes (Meyrick, 1891)
Chrysolarentia decisaria (Walker, 1863)
Chrysolarentia euclidiata (Guenée, [1858])
Chrysolarentia hedylepta (Turner, 1904)
Chrysolarentia melanchlaena (Turner, 1922)
Chrysolarentia phaeoxutha (Turner, 1926)[7]
Chrysolarentia tristis (Butler, 1882)
= *caesia* (Turner, 1904) syn. nov.[8]
Chrysolarentia argocyma (Turner, 1904)
Chrysolarentia nephodes (Meyrick, 1891)
Chrysolarentia pantoea (Turner, 1908)
Chrysolarentia subrectaria (Guenée, [1858])

Notes

1. *C. actinipha* was described from Broken Hill (NSW) and is found from Whyalla, South Australia, to Cowra and Round Hill in NSW. It is currently not known from Victoria; however, given its known range it is likely to be present in the dry north west of the State.
2. *C. insulsata* spec. rev. and *C. correlata* have been listed separately here. In the *Checklist of the Lepidoptera of Australia* (1996) they were treated as synonyms. Meyrick (1890) listed them sepa-

rately but thought they would ultimately prove the same. Turner (1904) placed them as one species, whereas Semmens et al. (1992) listed them separately. Scoble (1999) placed them as one species. *C. insulsata* is smaller and quite plain and found from the Grampians into South Australia as well as in Tasmania. *C. correlata* is larger, bright yellow with strong markings and is widespread in Victoria. The distribution of the two taxa overlaps in western Victoria, SA and Tasmania and both occur together in the one locality.

3. *Chrysolarentia gypsomela and C. argodesma* comb. nov. seem to be closely related and both are placed in *Chrysolarentia* here. They have been mixed together in collections. Each can be very variable with bands on the forewings that can be reddish brown, white or grey. An image of a syntype of *C. pentodonta* comb. nov. held in the ANIC, is of a single forewing but it is clearly identical to *C. gypsomela* and is here treated as a junior synonym of it

4. The holotype of *C. argodesma* is similar to, but probably different from, *C. gypsomela*. In the *Checklist of the Lepidoptera of Australia* (1996) *C. argodesma* was placed in *Xanthorhoe*. Specimens resembling *C. argodesma* are variable and are distributed from WA to NSW and Victoria. This group of moths needs further work to determine whether there is more than one species involved. Meyrick described *C. argodesma* from a single female from 'Melbourne, Victoria' (Meyrick, 1891).

5. *Chrysolarentia trygodes* (Meyrick, 1891), *C. crocota* (Turner, 1904) and *C. phaulophanes* (Turner, 1936) are listed as separate species in the *Checklist of the Lepidoptera of Australia* (1996). The specimens used for the original descriptions are different in colour but close external examination revealed little else to separate them. Until a more detailed study is made they are treated here as a single species under the senior name *Chrysolarentia trygodes* (Meyrick, 1891) (new synonymy).

6. *C. tacera* and *C. cydalima* are placed beside each other in this list because they are similar in appearance. *C. cydalima* has a more tan coloured forewing and *C. tacera* is grey. The wing pattern overlaps in the two species.

7. *C. phaeoxutha* is known from Mt Kosciuszko and is included here as it is likely to be found in the Victorian Alps and should be searched for.

8. *C. tristis* and *C. caesia* are listed as separate species in the *Checklist of the Lepidoptera of Australia* (1996). Since that publication a series collected by J. Landy near Urana, NSW in ANIC indicates they are the two sexes of the same species (new synonymy).

Acknowledgements
The authors would like to express appreciation to M. Hewish and A. Kallies for their editing and suggestions for improvements.

References

Lower, O.B. 1893. A Catalogue of Victorian Heterocera. Part V. *Vic. Nat.* 10: 81-84.
Marriott, P., Kallies, A. & Hilton, D. 2007. Towards a checklist for Victorian Moths and Butterflies (Lepidoptera). *Vic. Ent.* 37: 99-100.

McQuillan, P.B. & Edwards, E.D. 1996. Geometridae. Pp. 200-228. In Nielsen, E.S., Edwards, E.D. & Rangsi, V. (Eds) *Checklist of the Lepidoptera of Australia.* CSIRO Publishing, Collingwood.

Meyrick, E. 1891. Revision of Australian Lepidoptera. IV. *Proc. Linn. Soc. N.S.W.* 5 (4): 791-879.
Scoble, M.J. (Ed.) 1999. *Geometrid Moths of the World. A Catalogue. Lepidoptera, Geometridae.* CSIRO Publishing, Collingwood.

Semmens, T.D., McQuillan, P.B. & Hayhurst, G. 1992. *Catalogue of the insects of Tasmania.* Department of Primary Industry, [Hobart].

Turner, A.J. 1904. Revision of Australian Lepidoptera . Family Geometridae. *Proc. R. Soc. Vict.* 16: 218 -284.

Observations on the occurrence of *Psilogramma casuarinae* (Sphingidae: Lepidoptera) in Victoria

Jim Tuttle – 57 Inkerman St, St. Kilda, Vic. (jtuttle164@hotmail.com)

Recent information establishes that a previously unreported *Psilogramma* species occurs in Victoria. While this belated documentation is somewhat surprising given the size and unmistakable character of the moth, it is even more surprising that the species (*P. casuarinae*) may eventually prove to be widespread across the northern portion of the state.

In mid-November, 2009, Ted Cadwallader (Pers. comm.) made the author aware of the emergence of a large locally reared sphingid at Swan Hill which he tentatively identified as *Psilogramma menephron* (Cramer, 1780). The adult had been reared from a larva found feeding on box-leaf privet (*Ligustrum undulatum*: Oleaceae) in late March, 2009. Although severely deformed upon emergence, the author was provided with material for dna sequencing. Ted also indicated that during the summer of 2010 several additional larvae were found on ornamentally planted exotic privet (*Ligustrum undulatum*: Oleaceae) and ash trees (*Fraxinus griffithii*: Oleaceae) in Swan Hill.

Psilogramma menephron had long been suspected of being a species complex and among the various synonymies within that complex was *P. casuarinae* (Walker, 1856). Eitschberger (2004) resurrected *P. casuarinae* as a full species, and that status has since gained general acceptance. Sequencing of the Swan Hill material confirmed its identity as *P. casuarinae* (Pers. comm., Rodolphe Rougerie, Biodiversity Institute of Ontario, Guelph, Ontario, Canada).

The occurrence of *P. casuarinae* in the town of Swan Hill, geographically and habitat-wise far removed from its closest "known" locales along the central coast of New South Wales, suggested that *P. casuarinae* had been accidentally introduced on ornamental plantings. Such a theory seemed to make sense; the species, once introduced, was able to temporarily exploit the artificial situation. This theory also explained the lack of historical records.

Then, in April, 2010, Mike Halsey advised the author that occasionally he had encountered adults and larvae of a *Psilogramma* in Albury, New South Wales and Wodonga, Victoria. The larvae were associated with various "ash" trees. In addition, he indicated that he had encountered adults and recently found a last instar larva on an olive tree (*Olea europaea*: Oleaceae) in his garden in Yackandandah. The author had an opportunity to examine several of the adults and the 5th instar larva and confirmed that they are *C. casuarinae*.

Peter Marriott (Pers. comm.) indicates that surprisingly little historical collecting has been done along the Murray River in north-central Victoria. Given these recent reports, it seems more likely that *P. casuarinae* has always been resident along the Murray River, albeit in small numbers, and is naturally associated with native oleaceous host(s), as yet undetermined. Perhaps only when population numbers artificially build up by exploiting ornamental plantings does the presence of *P. casuarinae* become apparent. It will be interesting to see if *P. casuarinae* eventually turns up in additional towns along the Murray River such as Echuca.

Yet the distribution of *P. casuarinae* is not limited to the banks of the Murray River. The records from the Baranduda Range (Yackandandah) indicate that the species also breeds in the Northeast Goldfields region of Victoria. Such occurrences almost certainly refute the idea that *P. casuarinae* is a temporary accidental transplant to towns in northern Victoria. A great deal of additional field work is needed if we are to gain a better understanding of the species' natural requirements and distribution. And if such an obvious species has been missed all of these years, what other surprises are

awaiting us in northern Victoria?

Acknowledgments:

Ted Cadwallader of Swan Hill, Victoria

Mike Halsey of Yackandandah, Victoria

Rodolphe Rougerie, Biodiversity Institute of Ontario, Canadian Centre for DNA Barcoding, Guelph, Ontario, Canada

References:

Eitschberger, U. 2004. Weitere Studien an der *Psilogramma* Rothschild & Jordan, 1903. *Neue Entomologische Nachrichten* 57: 3-21 [3].

EXCURSION NOTICE

Tuesday 17 August. 8:00 pm start

Centre for Environmental Sciences (CES). Ernest Jones Drive Macleod Victoria 3085

Entry to the building will be via the door on the southern side of Building 3 (This is not the main reception, which as shown on the map from the EPA website is on the northern side of Building 4).

Head north on Springthorpe Boulevard, turn left into Terrace Way, about 100 metres further on the right is the EPA building (2 storey red brick) (Melways 19 J7).

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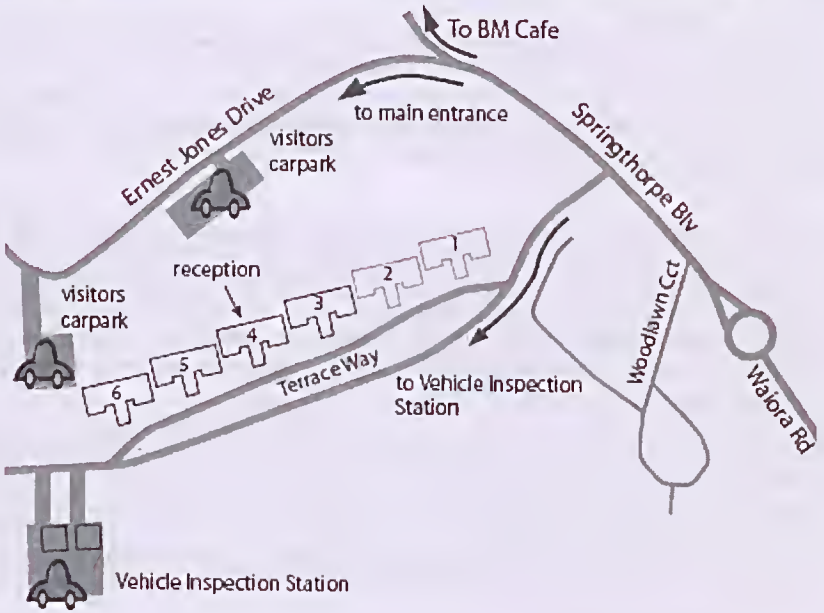

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Jim Tuttle – Sphingidae

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ISSN 0310 – 678